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B ~~The following statements present various aspects and features of the present invention.~~

Patent claims
What is claimed is:

1. A method of producing substantially globular lyogels in which the gel forming components are blended to form a lyosol after which, in order to form the lyogel, the lyosol is introduced into the moving medium which does not dissolve noticeably in the lyosol.
2. A method according to statement 1, characterised in that the medium is air.
3. A method according to statement 2, characterised in that the air contains at least one further gaseous medium.
4. A method according to statement 2 or 3, characterised in that the lyosol is fed dropwise into the moving air.
5. A method according to statement 2 or 3, characterised in that the lyosol is sprayed into the moving air.
6. A method according to at least one of statements 2 to 5, characterised in that the lyosol is introduced into a stream of air directed substantially in opposition to the force of gravity.
7. A method according to statement 6, characterised in that the lyosol particles are screened according to size by the flow of air which is directed in opposition to the force of gravity.
8. A method according to statement 6 or 7, characterised in that the velocity of the air flow diminishes in the direction of flow.
9. A method according to at least one of the preceding statements, characterised in that the lyosol particles are trapped in a water layer.

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10. A method according to at least one of the preceding statements, characterised in that the lyosol consists of silicic acid and mineral acid.

11. A method according to at least one of statements 1 to 9, characterised in that the lyosol is formed from a sodium water-glass solution and hydrochloric acid.

12. Use of substantially globular lyogels such as are obtainable in accordance with at least one of the preceding statements, in order to produce aerogels.

13. A method of producing substantially globular aerogels in which a substantially globular lyogel, obtained in accordance with at least one of statements 1 to 11, is converted to an aerogel.

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The following additional statements present various aspects and features of the present invention:

1. A method of producing substantially globular lyogels in which the gel forming components are mixed to produce a lyosol, after which the lyosol, in order to form a lyogel, is introduced into a moving medium which flows substantially against the direction of the force of gravity and which does not perceptibly dissolve in the lyosol.
2. A method according to additional statement 1, characterised in that the medium is air.
3. A method according to additional statement 2, characterised in that the air contains at least one further gaseous medium.
4. A method according to additional statement 2 or 3, characterised in that the lyosol is introduced dropwise into the moving air.
5. A method according to additional statement 2 or 3, characterised in that the lyosol is sprayed into the moving air.
6. A method according to at least one of additional statements 2 to 5, characterised in that the lyosol particles are screened according to size by the air stream which is directed in opposition to the force of gravity.
7. A method according to at least one of additional statements 2 to 5, characterised in that the velocity of the air stream diminishes in the direction of flow.
8. A method according to at least one of the preceding additional statements, characterised in that the lyosol particles are trapped in a layer of water.

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9. A method according to at least one of the preceding additional statements, characterised in that the lyosol is formed from silicic acid and mineral acid.
10. A method according to at least one of additional statements 1 to 8, characterised in that the lyosol is formed from a sodium water-glass solution and hydrochloric acid.
11. Use of substantially globular lyogels, produced according to at least one of the preceding additional statements, for the production of aerogels.
12. A method of producing substantially globular aerogels in which a substantially globular lyogel, produced according to at least one of additional statements 1 to 10, is converted to an aerogel.

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What is claimed¹ is:

- 1 1. A method of producing substantially globular lyogels in which the gel forming
2 components are mixed to produce a lyosol, after which the lyosol, in order to form a lyogel, is
3 introduced into a moving medium which flows substantially against the direction of the force
4 of gravity and which does not perceptibly dissolve in the lyosol.
- 1 2. A method according to claim 1, characterised in that the medium is air.
- 1 3. A method according to claim 2, characterised in that the air contains at least one
2 further gaseous medium.
- 1 4. A method according to claim 2, characterised in that the lyosol is introduced dropwise
2 into the moving air.
- 1 5. A method according to claim 2, characterised in that the lyosol is sprayed into the
2 moving air.
- 1 6. A method according to at least one of claim 2, characterised in that the lyosol
2 particles are screened according to size by the air stream which is directed in opposition to
3 the force of gravity.
- 1 7. A method according to at least one of claim 2, characterised in that the velocity of the
2 air stream diminishes in the direction of flow.
- 1 8. A method according to claim 1, characterised in that the lyosol particles are trapped in
2 a layer of water.

1 9. A method according to claim 1, characterised in that the lyosol is formed from silicic
2 acid and mineral acid.

1 10. A method according to claim 1, characterised in that the lyosol is formed from a
2 sodium water-glass solution and hydrochloric acid.

1 11. Use of substantially globular lyogels, produced according to claim 1, for the
2 production of aerogels.

1 12. A method of producing substantially globular aerogels in which a substantially
2 globular lyogel, produced according to claim 1, is converted to an aerogel.

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